

Saudi parent's attitude and practice about self-medicating their children

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ABSTRACT

Objective: The objective of this study was to test the parental self-medication attitude and practice toward their children in Saudi Arabia.

Materials and Methods: A cross-sectional study was conducted. Non-probability convenient random sampling method was used to select the participants. A total of 750 parents from different cities in the Saudi Arabia were involved in the study.

Results: The obtained response rate was 80%. The majority of participants were used to treat their children by western medicines. Most of respondents self-medicated their children in the month previous to the study period. The most common reported self-treated symptom was fever, although the most frequently used medicines were paracetamol and antibiotics. The attitude to treat fever was higher in males than in females ($P = 0.021$). The initial response for most participants in case of self treatment failure was to consult physicians in public hospitals; education level of participants showed significant difference ($P = 0.041$). The main reasons for self-medication were long waiting time in the clinics and high consultation fees. Occupation showed a significant differences ($P = 0.008$).

Conclusion: The current study revealed the fact that parental self-medication among public in Saudi Arabia is a routine practice. The researchers suggested introduction of parental educational interventions throughout the Saudi Arabia to ensure that children will receive best pharmaceutical care.

INTRODUCTION

Globally, drug utilization by children is of great concern, and has received a lot of attention. Many studies have been conducted in this area, both in the developed and developing countries, and all had shown various problems ranging from misuse and abuse of prescribed drugs, and errors of medications.^[1,2]

Children constitute a large percent of the population in developing countries and are prone to many

illnesses as a result of poverty.^[3] Most drugs in children are used to be administered outside hospitals, both as prescribed and non-prescribed ones.^[4] The first response by most families to many illnesses in their children has been found to be the use of non-prescribed drugs. The most frequently used drugs are traditional/herbal drugs, antibiotics, antispasmodic agents, antimalarials and antipyretics.^[5] The conditions for which the drugs were used included fever, diarrhea, vomiting, cough and upper respiratory tract infections.^[6] Self-medication is the act of obtaining and consuming drugs without the advice of a doctor either for diagnosis, prescription or surveillance of treatment.^[7] The nature and extent of self-medication varies in different cultural contexts^[6], and social and educational impacts may be greater than the influence of medical practice.^[8] In Saudi Arabia the government provides all citizens and expatriates working within the public sector with full

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and free access to all public health care services.^[9] The Ministry of Health (MOH) provides health services at three levels: primary, secondary and tertiary levels.^[10] According to MOH in Saudi Arabia, the real challenge for policy-makers in Saudi Arabia is to introduce a comprehensive, fair, and affordable service for the whole population. The current MOH statistics indicate that there is a mal-distribution of health care services and health professionals across geographical areas.^[10] A review study about the changing face of health-care in Saudi Arabia showed that people experience long waiting lists for many health care services and facilities.^[11] In addition, there is a dearth of services for disadvantaged groups such as the elderly, adolescents, and people with special needs such as disability particularly in rural areas.^[12]

In Saudi Arabia, the antibiotics are available over the counter, and 95% of pharmacists in one study did not adhere to the profession legislation act regarding antibiotic dispensing.^[13] In another study, the antibiotics were dispensed without medical prescription in (77.6% cases). In this study, the antibiotic was found to be easily obtained without a medical prescription or an evidence-based indication.^[14] The aim of this study was to test the parental self-medication knowledge attitude and practice toward their children.

MATERIALS AND METHODS

Across-sectional study was designed. The parents were recruited from the public to answer our questionnaire, non-probability convenient sampling method was adopted. The survey was carried out in different cities in Saudi Arabia which included: Riyadh (the country capital), Taif, Madinah, and Makkah. Data collection was carried out in different areas, shopping centers, health institutes, and housing area regardless of their gender, economic status or education level. The total sample size was 750 parents. According to the inclusion criteria, the parents who were able to read and write, and parents who had agreed to participate in this survey were included. Self-administered questionnaire was used to collect the data. A pilot study was carried out in a similar area for validity testing of the contents and the obtained results were not included in the study. Verbal informed consent was obtained from the parents who agreed to participate in the survey. Parents were required to answer and complete the questionnaire on the spot. The questionnaire consisted of three parts. The first part was designed

to obtain demographic characteristics such as gender, age, occupation, education, and number of children. The second part investigated the pattern of self-medication attitude, practice, and examined the type of medication given to treat the respondents' children. Most frequent medicines used and the most favorite sources of health information were also included in this part of questionnaire. In the third part, five points Likert-scale ranging from strongly agree to strongly disagree was used to determine the reasons of parental self-medication. The researchers explained fairly each question to all respondents before they filled in the questionnaire. This work was approved by the Pharmacy Practice Research Unit (PPRU) Ethical Committee, College of Pharmacy, Taif University. Data obtained from this study was computed and analyzed using Statistical Package for Social Sciences (SPSS) version 16. Descriptive results were presented as frequencies and percentages. Chi-square test was used to determine the association between the different parents' demographic characters. $P \leq 0.05$ was taken as a short cut for significance.

RESULTS

The response rate was 80%. Out of 600 responded parents, 338 (56.3%) were male. Age of most of the respondents 366 (61.1%) was ≤ 40 years. The majority 545 (90.8%) were non health-care workers and 352 (58.7%) out of the respondent were university educated. Total 192 (32%) of the tested parents had five or more children [Table 1].

Most of participated parents, i.e. 520 (86.7%), used to treat their children by western medicines while only 80 (13.3%) used traditional ones. The main source of medications were 263 (43.8%) by community pharmacies, 177 (29.5%) by hospitals, 137 (22.8%) by private clinics, and 23 (3.8%) by friends. There was a significant difference between educated parents and illiterate ones in selecting the source of medications ($P = 0.003$). The educated parents specially the university educated ones had obtained their medications from private clinics 86 (24.4%) and from public hospitals 80 (22.7%). The illiterate parents who used to obtain medications for their children from private hospitals were less than the educated ones 7 (13.0%), who generally went to the public hospitals 25 (46.3%). More than half, i.e. 322 (53.8%), of the parents were practiced parental self-medication in the previous month of the study, while 104 (17.4%) parents of them did the same in the previous 3 months,

and 69 (11.5%) of them did it in the last 6 months. The majority of the respondents in the present study, i.e. 575 (95.8%) were tended to self treat their children from minor illnesses, while 20 (3.3%) and 5 (0.8%) did for moderate and major illnesses respectively.

Generally, the first source of health information for the parents in the current study were the doctors (64.7%), followed by the pharmacists (60.2%), whereas relatives were the third source of information (31.3%) [Figure 1].

Table 2 illustrates the most frequent medicines used, which included paracetamol by 278 (64.3%), followed by antibiotics by 101 (16.8%). Self-treatment of more than one disease was a dominant habit among 489 (81.5%) of the interviewed parents, whereas the most common treated symptom was fever 46 (7.7%). The majority of females treated more than one disease by 227 (86.6%), while male parents who treated more than one disease were 262 (77.5%), whereas the attitude to treat fever was higher in males, i.e. 35 (10.4%), than in females, i.e., 11 (4.2%) ($P = 0.021$).

Table 3 shows parents' attitude toward self-treatment failure. In the current study, about half of the participants, i.e., 308 (51.33%) consulted doctors in public hospitals, and 231 (38.6) consulted community pharmacists. Education level of the participants showed significant difference ($P = 0.041$). The higher educated parents tended to consult physicians in public hospitals less than the illiterate parents, i.e., 161 (45.7%) and 34 (63.0%), respectively.

Table 4 explained the respondents' reasons for parental self-medication to their children. It was clear that the main reason for parental self medication to their children was the increased waiting times in the clinics. Occupation showed statistically a significant differences, ($P = 0.008$). Most of non health-care worker

parents, i.e. 413 (75.8%), believe that the waiting time in the clinics is too long as compared to the health-care worker parents, i.e., 29 (53.7%). The high consultation fee was also an important reason for parental self-medication to their children, i.e., 321 (53.5%). Males parents, i.e., 195 (57.7%), admitted that the consultation fee is an important reason than the females ones, i.e., 126 (48.1%), ($P = 0.006$).

Table 1: Socio-demographic data of the parents

Socio-demographic characteristics	Frequency	Percentage
Gender		
Male	338	56.3
Female	262	43.7
Age		
Less than 40 years	366	61.1
40 years and above	233	38.9
Occupation		
Healthcare	55	9.2
Non-healthcare	545	90.8
Education		
University	352	58.7
Higher secondary school	140	23.3
Intermediate school	54	9
Illiterate	54	9
Children number		
One	109	18.2
Two	109	18.2
Three	102	17
Four	88	14.7
Five and more	192	32

Table 2: The most common diseases and frequent medicines used by parental self medication

	Frequency	Percentage
Most common diseases		
More than one disease	489	81.5
Fever	46	7.7
Cough	22	3.7
Headache	18	3.0
Flu	13	2.2
Diarrhea	10	1.7
Vomiting	2	0.3
Most frequent used medicines		
Paracetamol	278	46.3
Antibiotics	101	16.8
Cough syrup	86	14.3
Anti-diarrhea	44	7.3
Anti-histamines	39	6.5
Herbal drugs	19	3.2
Aspirin	14	2.3
Metronidazole	13	2.2
Vitamins	5	0.8
Mefnamic acid	1	0.2

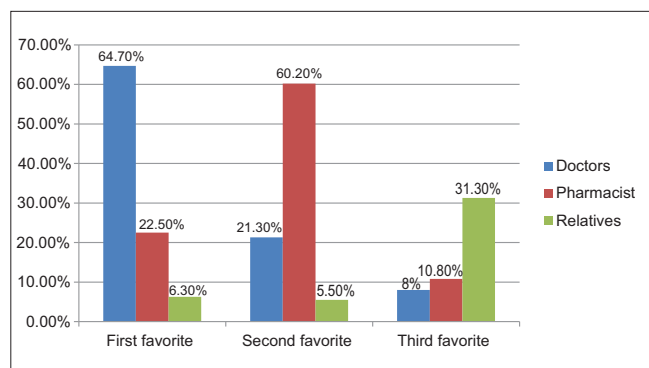


Figure 1: Favorite source of health information

Table 3: General action in case of failure of recovery after self - treatment

	Consult community pharmacist	Go to private clinic	Go to hospital	Seek advice from friends and/or relatives	Continue self-medication	P value
Age (%)						
Under 40	20 (5.5)	137 (37.4)	196 (53.6)	9 (2.5)	4 (1.1)	0.249
Above 40	22 (9.4)	94 (40.3)	111 (47.6)	4 (1.7)	2 (0.9)	
Gender (%)						
Male	24 (7.1)	133 (39.3)	170 (50.3)	10 (3.0)	1 (0.3)	0.171
Female	18 (6.9)	98 (37.4)	138 (52.7)	3 (1.1)	5 (1.9)	
Occupation (%)						
Healthcare	4 (7.3)	15 (27.3)	34 (61.8)	2 (3.6)	0 (0.0)	0.343
Non-healthcare	38 (7.0)	216 (39.6)	274 (50.3)	11 (2.0)	6 (1.1)	
Education (%)						
University	29 (8.2)	153 (43.5)	161 (45.7)	7 (2.0)	2 (0.6)	0.041
Higher secondary	6 (4.3)	47 (33.6)	80 (57.1)	5 (3.6)	2 (1.4)	
Intermediate	3 (5.6)	16 (29.6)	33 (61.1)	0 (0.0)	2 (3.7)	
Illiterates	4 (7.4)	15 (27.8)	34 (63.0)	1 (1.9)	0 (0.0)	
Total						
Count	42	231	308	13	6	600
%	7	38.6	51.3	2.2	1.0	100

Table 4: Reasons of parental self medication to their children

Reason of self medication	Strongly agree *F%	Agree F%	Neutral F%	Disagree F%	Strongly disagree F%	Chi-square test P values			
						Age	Gender	Education	Occupation
Waiting time in the clinic is too long	272 (45.4)	170 (28.4)	78 (13.0)	58 (9.7)	21 (3.5)	0.458	0.065	0.618	0.008
Consultation fees are too expensive	126 (21.0)	195 (32.5)	154 (25.7)	91 (15.2)	34 (5.7)	0.540	0.006	0.802	0.141
Nearest clinic is too far away	59 (9.8)	135 (22.5)	163 (27.2)	186 (31.0)	57 (9.5)	0.855	0.579	0.983	0.190
Bad attitudes of healthcare workers	93 (15.5)	107 (17.8)	189 (31.5)	163 (27.2)	48 (8.0)	0.017	0.050	0.989	0.067
Lack of sufficient health information relayed by the medical	96 (16.0)	137 (22.8)	178 (29.7)	143 (23.8)	46 (7.7)	0.002	0.276	0.508	0.490
I am expert enough to treat my children	47 (7.8)	137 (22.8)	171 (28.5)	150 (25.0)	95 (15.9)	0.006	0.026	0.335	0.001
Are you aware of side effects of medications	102 (17.0)	251 (41.8)	112 (18.7)	105 (17.5)	30 (5.0)	0.785	0.786	0.036	0.003
Can know illness of my children from symptoms	91 (15.2)	294 (49.0)	119 (19.8)	79 (13.2)	17 (2.8)	0.000	0.454	0.007	0.084

*F=Frequency, %=Percentage

DISCUSSION

The present study was carried out to test the parental self-medication attitude and practice towards their children in Saudi Arabia. The dominant respondents were male and well educated. Most of participants, i.e., (86.7%), used western medicines; this is probably because most of the respondents were well-educated and they think that western medicines are more efficient and more reliable than traditional ones. These results are in agreement with a study conducted in Malaysia, where most of the parents prefer western medicines to treat their children.^[15] The main sources of medications were the community pharmacies (43.8%);

this may be due to ease and availability of medicines and pharmacies in everywhere in Saudi Arabia.

More than half (53.8%) of the responded parents practiced parental self-medication a month prior to this study, which had reflected an inappropriate practice in Saudi Arabia. This practice was common in many countries such as in China, which showed that about (51%) children received parental self-medication on six or more occasions during a year period and 32.8% on four to five occasions.^[16] The majority of the respondents (95.8%) tend to self treat their children for minor illnesses, which could be considered as a common practice.

The most common self-treated symptom was fever by 7.7%, while the most frequent medicines used were paracetamol by 64.3%, followed by antibiotics by 16.8%. The liberal use of antibiotics in fever usually leads to antibacterial resistance. This is a common problem that overuse of antibiotics has been found worldwide in both community and hospitals in developing countries.^[17]

Respondents admitted that doctors were the first favorite source of health information (64.7%), while pharmacists were the second choice 60.2% and relatives were the third option for 31.3% parents. Although the pharmacist is a person who know well about drug information, the participants preferred the physicians as the first favorite source for health information; this may be due to the lack of information about the role of pharmacists among the community.

The main reasons of parental self-medication were the waiting times in the clinic and the high consultation fees. This was in agreement with a study by Tong *et. al.* about uses of antibiotics among Chinese children which confirmed the fact that fees of the medical consultation is an important reason of self-medication.^[16]

CONCLUSION

The current study revealed the fact that parental self-medication among public in Saudi Arabia is a routine practice. The most common parental self-medicated medicines were paracetamol and antibiotics, while the most ailments were fever and flu. The main obtained reasons to parental self-medication were expensive consultation fees and long waiting time in clinics and hospitals. The researcher suggested introduction of parental educational intervention throughout the Saudi Arabia to ensure that the children will receive the best pharmaceutical care.

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DECLARATIONS

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REFERENCES

1. Birchley N, Conroy S. Parental management of over-the-counter medicines. *Paediatr Nurs* 2002;14:24-8.
2. Edwards DJ, Richman PB, Brandley K, Eskin B, Mandell M. Parental use and misuse of antibiotics: Are there differences in urban vs. suburban settings? *Acad Emerg Med* 2002;9:22-6.
3. Lee D, Balasubramaniam K, Ali H. Drug utilization studies: Their transferability between industrialized and developing countries. In: Dukes MNG, editor. *Drug Utilization Studies. Methods and uses.* Copenhagen, World Health Organization Regional office Europe, 1993 (WHO Regional Publications, European Series, No. 45).
4. Fosarelli P, Wilson M, De Angelis C. Prescription medications in infancy and early childhood. *Am J Dis Child* 1987;141:772-5.
5. Zaki A, Abdel-Fattah M, Bassili A, Arafa M, Bedwani R. The use of medication in infants in Alexandria, Egypt. *Eastern Mediter Health J* 1999;5:320-7.
6. Sharma R, Verma U, Sharma CL, Kapoor B. Selfmedication among urban population of Jammu city. *Indian J Pharmacol* 2005;37:37-45.
7. Montastruc JL, Bagheri H, Geraud T, Lapeyre MM. Pharmacovigilance of self medication. *Therapie* 1997;52:105-10.
8. Tognoni G, Bonati M. Second generation clinical pharmacology. *Lancet* 1986;2:1028-9.
9. Jannadi B Alshammari, Khan A. Hussain. R. Current structure and future challenges for the healthcare system in Saudi Arabia. *Asian Pac J Trop Med*, 2008;3:43-50.
10. Health statistical year book 4. Riyadh, Saudi Arabia, Ministry of Health; 2009.
11. Walston S, Al-Harbi Y, Al-Omar B. The changing face of health-care in Saudi Arabia. *Ann Saudi Med* 2008;28:243-50.
12. New strategy for health services in Saudi Arabia. *Al-Egtisadia Daily*, 9 September 2009 [in Arabic].
13. Al-Hassan M.I. Community pharmacy practice in Saudi Arabia: An Overview. *Internet J Pharmacol* 2011; 9. Available from <http://www.ispub.com/journal/the-internet-journal-of-pharmacology/volum-9-number-1/community-pharmacy-practice-in-saudi-arabia-an-overview.htm1#sthash.kFVMFmGp.dpbs> [Last accessed on May 2013].
14. Bin Abdulhak AA, Altannir MA, Almansor MA,

- Almohaya MS, Onazi AS, Marei MA, *et al.* Non prescribed sale of antibiotics in Riyadh, Saudi Arabia: A Cross Sectional Study. *BMC Public Health* 2011;11:538.
15. Dawood OT, Ibrahim MIM, Palaian S. Parent's knowledge and management of their children's ailments in Malaysia. *Pharm Prac* 2010;8:96-102.
16. Bi P, Tong SL, Parton KA. Family self-medication and antibiotics abuse for children and juveniles in a Chinese city. *Soc Sci Med* 2000;50:1445-50.
17. Isturiz RE, Carbon C. Antibiotic use in developing countries. *Infect Control Hosp Epidemiol* 2000; 21:394-7.

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